

Amendments to the Specification:

Please replace the paragraph beginning on page 6, line 17,
with the following paragraph:

--repeatedly executing an ACS operation and thereby
calculating a transition metric value with reference to a
transition from ~~an output state~~ a precursor state at a time
step n to a target state at a time step $n+1$, by--

Please replace the paragraph beginning on page 7, line 8, with
the following paragraph:

--In accordance with an additional feature of the invention,
the first estimated value is separately determined for each
~~output state~~ precursor state, specifically on a basis of
decisions on input data symbols taken on the path $(P(z_n^i))$
leading to the respective ~~output state~~ precursor state (z_n^i) ---

Please replace the paragraph beginning on page 7, line 14,
with the following paragraph:

--In accordance with another feature of the invention, the
first estimated value is determined using the equation

$\hat{a}_{n-1}^{(i)} = \hat{a}_{n-2}^{(i)} \exp\{j\pi\eta d_{n-1}^{(z_n^i)}\}$, whereby $\hat{a}_{n-1}^{(i)}$ and $\hat{a}_{n-2}^{(i)}$ are the first estimated
values for the $n-1$ th and $n-2$ th replacement symbol,
respectively, relating to the ~~output state~~ precursor state with

index i , $d_{n-1}^{P(Z_n^i)}$ is an input data symbol, decided in the receiver, with reference to a path leading to the respective ~~output state~~precursor state Z_n^i , and η denotes the modulation index.--

Please replace the paragraph beginning on page 8, line 6, with the following paragraph:

--In accordance with again an additional feature of the invention, a second estimated value is separately determined for each ~~output state~~precursor state, specifically on a basis of decisions on input data symbols taken on the path ($P(Z_n^1)$) leading to the respective ~~output state~~precursor state (Z_n^i).--

Please replace the paragraph beginning on page 9, line 1, with the following paragraph:

--a calculating unit for calculating a transition metric value with reference to a transition from an ~~output state~~precursor state at a time step n to a target state at a time step $n+1$, and--

Please replace the paragraph beginning on page 9, line 19, with the following paragraph:

--each calculating section is configured to carry out a separate calculation of a first estimated value for the n -1th

replacement symbol on the basis of decisions taken on input data symbols for a path ($P(z_n^i)$) leading to the respective ~~output-state~~precursor state (z_n^i) under consideration.--

Please replace the paragraph beginning on page 10, line 2, with the following paragraph:

--In accordance with yet another feature of the invention, each calculating section is configured to carry out the calculation of the first estimated value using the equation

$\hat{a}_{n-1}^{(i)} = \hat{a}_{n-2}^{(i)} \exp\{j\pi\eta d_{n-1}^{P(z_n^i)}\}$, where $\hat{a}_{n-1}^{(i)}$ and $\hat{a}_{n-2}^{(i)}$ respectively are the first estimated values for the $n-1$ th and $n-2$ th replacement symbols relating to the ~~output-state~~precursor state of index i , $d_{n-1}^{P(z_n^i)}$ is an input data symbol decided in the receiver with reference to the path leading to the ~~output-state~~precursor state (z_n^i) under consideration, and η denotes the modulation index.--

Please replace the paragraph beginning on page 10, line 23, with the following paragraph:

--each calculating section is configured to carry out a separate calculation of a second estimated value for the $n-1$ th replacement symbol on a basis of decisions taken on input data

symbols for the path ($P(z_n^i)$) leading to the respective ~~output~~
~~state~~precursor state (z_n^i) under consideration.--

Please replace the paragraph beginning on page 31, line 17,
with the following paragraph:

-- $a_{n-1}^{(i)}$ denoting the replacement symbol assigned to the i th
transmitter state, and $d_n^{(i \rightarrow q)}$ denoting that input data symbol
which in relation to the time step n leads from the precursor
state with index i into the target state with index q . Since
the state description in the case of the MLSE according to the
invention no longer is performed with the aid of the
replacement symbols, $a_{n-1}^{(i)}$ is unknown a priori in the receiver
(in the case of the previously described conventional VA, $a_{n-1}^{(i)}$
 $= z_n^{0,(i)}$ would be prescribed by the ~~output~~stateprecursor state
considered).--